

METHODS AND SYSTEMS FOR
ADAPTIVE RECEIVER EQUALIZATION

ABSTRACT OF THE DISCLOSURE

Methods and systems for minimizing distortions in an analog data signal include equalizing the analog data signal at a receive end. In an embodiment, the invention adapts equalization parameters to a signal path associated with the analog data signal. Adaptive control logic is implemented with analog and/or digital components. In an embodiment, the invention equalizes a discrete-time analog representation of an analog data signal. In an embodiment, the invention digitally controls equalization parameters. In an embodiment, a resultant equalized analog data signal is digitized. In an example implementation, an analog data signal is sampled, a quality of the samples is measured, and one or more equalization parameters are adjusted with digital controls as needed to minimize distortion of the samples. The equalized samples are then digitized. The present invention is suitable for lower rate analog data signals and multi-gigabit data rate analog signals.